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BRIEF NOTES

Self-directed continuing medical education at the point-of-care: implications for cost and value

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Abstract

Purpose. There is a growing interest in the use of point-of-care clinical decision support resources as a form of continuing medical education (CME). This paper models various cost and value outcomes that might emerge from the use of a clinical decision support tool (BMJ Best Practice) as CME.

Methods. BMJ Best Practice is the clinical decision support tool of the BMJ. Healthcare professionals can use it to do self-directed CME. We modeled the use of clinical decision support as a component of CME and evaluated the potential impact of this use on costs.

Results. High users of self-directed CME at the point-of-care can reduce the cost of their CME. This is mainly by saving on the costs of external CME meetings.

Conclusions. Healthcare professionals should consider using a blend of self-directed CME and face-to-face education to ensure that their CME activities offer maximum value for a given cost.

Key words

- self-directed learning
- continuing medical education
- cost

PURPOSE

There is a growing interest in the use of point-of-care clinical decision support resources as a form of continuing medical education (CME). Healthcare professionals often have unanswered questions as they see patients and can use clinical decision support tools to answer these questions. So it makes sense for the use of clinical decision support resources to count as CME. To date, much of the research in this field has focused on linking point-of-care CME to learning needs and on capturing changes in practice following the learning [1].

But until now there has been little interest in evaluating self-directed CME at the point-of-care from the perspective of cost and value. This is surprising as this form of learning has the potential to save costs and deliver value. This is especially important at a time when healthcare professionals and their employing institutions are under pressure to save costs and to ensure that their investments in healthcare professional education deliver maximum returns [2, 3].

This paper models various cost and value outcomes that might emerge from the use of a clinical decision support tool (BMJ Best Practice) as CME.

METHODS

BMJ Best Practice is the clinical decision support tool of the BMJ. Healthcare professionals can use clinical decision support tools to do self-directed CME at the point-of-care. In this study, we modeled the use of clinical decision support as a component of CME and evaluated the potential impact of this use on the cost of education. A number of models were looked at – all from the perspective of a hospital doctor. It was assumed that the doctors were completing 50 hours of CME per year. This is the standard number of hours that most doctors in the UK are expected to do as part of their CME.

RESULTS

Model 1: the non-user of self-directed CME at the point-of-care

This user does no self-directed CME at the point-of-care. All 50 hours of their CME comes from face-to-face education. This user does 50% of their CME from internal CME meetings (25 hours) and 50% from external CME meetings (25 hours). It is assumed that each external CME meeting accounts for 5 hours of CME. Thus they must attend 5 one day meetings per year. It is assumed that the average cost for a one day external CME meeting which provides 5 credits is £200 [4-6].

It was assumed that all internal CME meetings are free to the doctor.

Table 1 shows the cost of this doctor's learning activity in one year.

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Model 2: the low user of self-directed CME at the point-of-care

This user does 5 hours of self-directed CME at the point-of-care, 25 hours of internal CME and 20 hours of external CME (4 meetings).

The cost of access to the clinical decision support tool (BMJ Best Practice) is £170 per year.

Table 2 shows the cost of this doctor's learning activity in one year.

Model 3: the medium user of self-directed CME at the point-of-care

This user does 10 hours of self-directed CME at the point-of-care, 25 hours of internal CME and 15 hours of external CME.

Table 3 shows the cost of this doctor's learning activity in one year.

Model 4: the high user of self-directed CME at the point-of-care

This user does 15 hours of self-directed CME at the point-of-care, 25 hours of internal CME and 10 hours of external CME.

Table 4 shows the cost of this doctor's learning activity in one year.

All of the learners who use self-directed CME can save costs. The highest users can save up to £430 per year (£1000 - £570).

CONCLUSIONS

This paper shows that high users of self-directed CME at the point-of-care can reduce the cost of their CME by up to 43% per year. This is mainly by saving on the costs of external CME meetings.

There are limitations to this analysis. These limitations

Table 1
Cost of learning in one year for the non-user of self-directed CME at the point-of-care

	Self-directed CME at the point-of-care using clinical decision support	Internal CME	External CME
Cost	0	0	£200 x 5 = £1000 (for 5 CME events)
Cost per credit	0	0	£40
Overall cost	£1000		

Table 2
Cost of learning in one year for the low user of self-directed CME at the point-of-care

	Self-directed CME at the point-of-care using clinical decision support	Internal CME	External CME
Cost	£170	0	£200 x 4 = £800 (for 4 CME events)
Cost per credit	£34	0	£40
Overall cost	£970		

Table 3
Cost of learning in one year for the medium user of self-directed CME at the point-of-care

	Self-directed CME at the point-of-care using clinical decision support	Internal CME	External CME
Cost	£170	0	£200 x 3 = £600 (for 3 CME events)
Cost per credit	£17	0	£40
Overall cost	£770		

Table 4
Cost of learning in one year for the high user of self-directed CME at the point-of-care

	Self-directed CME at the point-of-care using clinical decision support	Internal CME	External CME
Cost	£170	0	£200 x 2 = £400 (for 2 CME events)
Cost per credit	£11.30	0	£40
Overall cost	£570		

mainly relate to the models that were constructed. All of the models are conservative in relation to the costs of external CME meetings. Only the costs of the delegate fees to external CME meetings were counted. We did not count the cost of travel to such meetings or accommodation or locum costs (which would be required in most if not all circumstances). If these costs had been counted, the savings from self-directed learning would have been higher. We just looked at the financial costs of attending external CME meetings – and did not look at the environmental impact of travelling to such meetings (in terms of the carbon footprint). Additional models could have been created where users do more self-directed learning. Cost savings would have been even greater in these cases. However, we do not recommend that learners use self-directed learning to the exclusion of other methods of learning. There are undoubtedly benefits associated with going to external CME meetings. It is true that some external CME meetings are free – however these are nearly always sponsored by commercial bodies that have an interest in the content of the meeting. We do not recommend these meetings as we do not believe that there is such a thing as a free lunch. Lastly only the costs from the perspective of an individual learner were looked at. Clinical decision support tools can be provided a lower cost per head to groups of learners in an institution – institutional access would thus provide even greater value.

We only counted the cost of an annual subscription to a self-directed learning and clinical decision support product. The costs of hardware or internet connections were not counted. This is because previous research has shown that healthcare professionals use their devices for both personal and professional purposes and so do not see them as an additional cost that they must take on just to do CME. [7] We looked at the cost of a single self-directed learning and clinical decision support product – BMJ Best Practice. The results of our models may be extrapolated to other products – depending on their cost and the value that they offer.

It is clear that some forms of CME will result in different outcomes to others. We do not argue that one form of CME is better than another. Rather it is postulated that learners should reflect upon the cost and outcomes of different learning activities and at the very least take this into consideration when making decisions about their learning.

Finally, we realise that self-directed learning at the point-of-care will only work as a form of CME if users have access to clinical decision support tools that will work at the point-of-care. This means tools that will work on mobile devices both online and offline; that provide fast access to actionable and practical content that fits with the clinical workflow; and that allows users to track and record their learning so that they will have an ongoing record of their CME and the impact that it has had on their clinical practice. An important advantage of CME tools at the point-of-care is that they naturally have a high relevance to the learner's practice: the learning will be in context, case-based, and learner-centred; and it may immediately generate a change of practice. This is the form of self-directed learning that will ultimately provide value.

We do not claim that our models are perfect but we do think that they are a reasonable fit with the learning activities that healthcare professionals are required to do. We also feel that they can be used by learners and their employers to develop innovative blends of face-to-face and online self-directed learning that will save costs and deliver value.

Conflict of interest statement

KW works for BMJ which produces a clinical decision support tool (BMJ Best Practice) and also face-to-face educational events (BMJ Masterclasses).

Ethics

This was not needed as this study involved desk research based on different medical education models.

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REFERENCES

1. Moja L, Kwag KH. Point of care information services: a platform for self-directed continuing medical education for front line decision makers. Postgrad Med J. 2015;91(1072):83-91.
2. Brown C, Ross S, Cleland J, Walsh K. Money makes the (medical assessment) world go round. The cost of components of a summative final year Objective Structured Clinical Examination (OSCE). Med Teach. 2015;29:1-7.
3. Schroter S, Jenkins RD, Playle RA, Walsh KM, Probert C, Kellner T. Evaluation of an online interactive Diabetes Needs Assessment Tool (DNAT) versus online self-directed learning: a randomised controlled trial. BMC Medical Education. 2011;11:35.
4. www.rcplondon.ac.uk/events/neurology-systemic-disease.
5. www.rcpsych.ac.uk/traininpsychiatry/conferencestraining/courses/medicolegal.aspx#Presenting.
6. http://masterclasses.bmj.com/non-clinical-courses/time-management-for-doctors-november-2017/.
7. Walsh K. Cost and value in e-learning: the perspective of the learner. BMJ Simulation and Technology Enhanced Learning. Published Online First: 06 September 2017. DOI: 10.1136/bmjstel-2017-000239